

### REMARKS

Claims 53-108 are pending in the present application. Applicants appreciate the indication that claims 105, 106, and 108 are allowed.

Claims 53-63,70-82,89-92, 94-100 and 102 stand rejected under 35 USC 112, first paragraph. Claims 83-84, 86-88, and 104 stand rejected under 35 USC 102 for anticipation by U.S. Patent No. 5,691,978 to Kenworthy. Claims 64-67,69, 83-87, 93, and 101 stand rejected under 35 USC 103 for obviousness over U.S. Patent No. 5,649,296 to MacLellan et al. in view of U.S. Patent No. 4,725,841 to Nysen et al. Claim 107 stands rejected under 35 USC 103 for obviousness over Kenworthy.

Applicants wish to thank the Examiner for the courtesies extended to the undersigned during the telephone interview. The Examiner stated during the interview that the 112, first paragraph rejections would be withdrawn.

On pages 5, 6 and 9 of the Office Action, teachings of MacLellan and Nysen are identified as allegedly corresponding to limitations of Applicants' claims. It is stated that the prior art fails to disclose a local signal is adjusted responsive to a communication signal as claimed. However, it is thereafter stated that it would have been obvious to scale (adjust) the amplitudes of the two signals before mixing them at the mixer to prevent large amplitude of one signal would dominate a small amplitude of the other signal.

The above-statement, even if true, fails to support a proper 103 rejection of claims. Absolutely no teachings in the art disclose *adjusting the local signal responsive to the communication signal* as positively-recited in claim 64. Accordingly, even if the references are combined, and assuming *arguendo* it is obvious to adjust a signal prior to mixing, such combination suggesting mere adjustment of a signal fails to disclose or suggest limitations

of claim 64 including *adjusting the local signal responsive to the communication signal* as defined.

As set forth in Col. 5, lines 25-40 of Nysen, elements 28, 30 merely automatically vary the signal level of received signals without any additional stimulus. There is absolutely no teaching or suggestion of adjusting a signal responsive to a communication signal as claimed and claim 64 is allowable.

The art is devoid of disclosing limitations of Applicants' claims. The only source of the rejection may result from the personal knowledge of the Examiner. **Applicants hereby request identification of prior art which discloses the features not found in the references of record or the submission of an affidavit in support of the 103 rejection of claim 64.** "[A]ssertions of technical facts in areas of esoteric technology must always be supported by citation of some reference work" and "allegations concerning specific 'knowledge' of the prior art, which might be peculiar to a particular art should also be supported." *In re Ahlert*, 424 F.2d 1088, 165 USPQ 418, 420-421 (CCPA 1970).

Proper obviousness rejections require proper motivation to combine the reference teachings. There is no motivation to combine the teachings of MacLellan with the teachings of Nysen. First, there is no reasonable expectation of success as required by MPEP 2143 inasmuch as the combination of the reference teachings would require substantial engineering or modification to the reference teachings. Nysen is not concerned with backscatter communications, continuous wave communications, or radio frequency identification device communications. In fact, Nysen is devoid of any such teachings despite assertions on page 4 of the Office Action that Nysen discloses a backscattered

signal. Applicants have electronically searched Nysen and have failed to uncover any such teachings. The Office Action fails to identify any teachings of Nysen which allegedly disclose backscatter communications. Device 20 of Nysen includes signal conditioning elements 40 including a known delay  $T_1$  and a known amplitude modification  $A_1$  as set forth in column 6, lines 9-30. The conditioning elements 40 fail to disclose or suggest any backscatter operations or communications.

Accordingly, Nysen relates to different communications technologies than MacLellan and one would not be motivated to combine the inapposite teachings of Nysen with the teachings MacLellan. The proposed modification or combination of the prior art would require substantial reconstruction or redesign of the reference teachings and/or would change the principle of operation of the prior art. Numerous modifications would be required to combine the conditioning elements of Nysen and a backscatter system of MacLellan. According to the MPEP, the teachings of the combined references are not sufficient to render the claims *prima facie* obvious. MPEP 2143.01(8th ed.) citing *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). The *Ratti* court reversed a PTO 103 rejection because the suggested combination of references would require a substantial reconstruction and redesign of the elements shown in the primary reference as well as a change in the basic principle under which the primary reference construction was designed to operate.

On page 10 of the Action, it is stated that backscattered signal and reply signal are interchangeable. Applicants disagree. There are numerous forms of reply signals, one of which is a backscatter signal. A few other examples include actively transmitted reply

signals and magnetically coupled reply signals, to name a few. The alleged interchangeability is in error and one would not be motivated to combine signal processing of a backscatter system with a non-backscatter system as presented in the Office Action. The rejection of claim 64 is improper for at least this additional reason.

In addition to the vastly different types of communications employed by the respective references, Nysen refers to communications of signals having a plurality of frequency values within a prescribed frequency range responsive to a voltage V as set forth in column 6, line 64 to column 7, line 5 and such teachings do not disclose or suggest continuous wave teachings and are not combinable with the continuous wave teachings of MacLellan. Substantial redesign is required to combine the reference teachings and one would not be motivated to combine the reference teachings as set forth in the Office Action. The obviousness rejection is improper without the proper motivation.

It is set forth on page 9 of the Action that it would have been obvious to combine the reference teachings so that a "better result" could be achieved including preventing a large amplitude of one signal dominating a small signal of the other signal. The record is entirely devoid of any evidence that a better result would be achieved by making the proposed combination. Indeed, the record is devoid of any evidence that the inapposite reference teachings could be combined at all let alone to produce "a better result." There is no evidence that MacLellan is concerned with a problem of domination of signal amplitudes, preventing such dominance, or if the dominance did indeed exist, that such would be cured by the combination of inapposite reference teachings.

The Examiner is respectfully reminded that a proper motivational rationale for a

combination of art provides that *impetus necessary* to cause one skilled in the art to combine the teachings of the references to make the proposed modification *Ex Parte Levengood*, 28 USPQ2d, 1300, 1301, Footnote 2, (Bd. Pat. App. and Inter. 1993) (citations omitted)). The Federal Circuit discussed proper motivation *In re Lee*, 61 USPQ 2d 1430 (Fed. Cir. 2002). The motivation identified in the Office Action is akin to the conclusory statements set forth in *In re Lee* which were found to fail to provide the requisite motivation to support an obviousness rejection. The Court in *In re Lee* stated the factual inquiry whether to combine references must be through and searching. It must be based on objective evidence of record. The Court in *In re Fritch*, 23 USPQ 2d 1780, 1783 (Fed. Cir. 1992) stated motivation is provided only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. The *Lee* Court stated that the Examiner's conclusory statements in the *Lee* case do not adequately address the issue of motivation to combine.

In the instant case, the record is entirely devoid of any evidence to support motivation to combine the teachings apart from the bald conclusory statements of the Examiner which are insufficient for proper motivation as set forth by the Federal Circuit. The Office cannot rely on conclusory statements when dealing with particular combinations of prior art and specific claims but must set forth rationale on which it relied. Statements set forth in the present Office Action are akin to the alleged motivation discussed *In re Lee* and accordingly are insufficient to combine the reference teachings. The 103 rejection of claim 64 is improper without the proper motivation and Applicants respectfully request

allowance of claim 64 in the next action.

No motivation exists apart from Applicants' disclosure, and accordingly, the Examiner has improperly relied upon teachings of Applicants' disclosure to arrive at the 103 rejection. The obviousness rejection of claim 64 is improper for at least the above-mentioned numerous reasons.

The claims which depend from independent claim 64 are in condition for allowance for the reasons discussed above with respect to the independent claim as well as for their own respective features which are neither shown nor suggested by the cited art.

Claim 67 recites the receiver is configured to *adjust the local signal including matching an amplitude of the local signal with an amplitude of the modulated continuous wave signal*. The Examiner recites a scaling process as allegedly disclosing the claimed matching on page 10 of the Action. The Examiner is in error. In no fair interpretation does mere scaling disclose matching an amplitude of one signal to an amplitude another signal. Scaling merely adjusts the amplitude regardless of other signals while matching matches the amplitudes of different signals. Without more, mere scaling clearly fails to disclose or suggest the claimed matching. Claim 67 is allowable for at least this reason.

Referring to claim 83, MacLellan and Nysen, taken alone or in combination, fail to disclose or suggest the claimed reducing comprising *adjusting a local signal responsive to a communication signal* and combining the communication signal and the local signal after the adjusting as positively recited in claim 83. The prior art is entirely devoid of disclosing or suggesting positively recited limitations of claim 83 and claim 83 is allowable for at least this reason.

Additionally, there is absolutely no motivation to combine the inapposite teachings of MacLellan with the teachings of Nysen. The Examiner has engaged in improper utilization of Applicants' disclosure as a roadmap as motivation for combining the reference teachings. The obviousness rejection of claim 83 is improper without the requisite motivation.

With respect to the 102 rejection of claim 83 over Kenworthy, the Examiner identifies teachings of Kenworthy on page 3 of the Action. The Examiner states that the subtraction of the self-transmitted signal from the receive signal would read on the claimed reducing an amplitude of a first component of the communication signal. However, claim 83 clearly recites *the reducing comprising adjusting the local signal responsive to the communication signal*. There is no adjustment of a local signal as defined responsive to the communication signal. Signal 18 is applied to Ds, Ws and Ss of element 23 of Fig. 2 but no adjustment of the local signal responsive to the communication signal is disclosed. Further, Kenworthy fails to disclose or suggest combining the communication signal and the local signal after the adjusting as claimed. The Office Action is deficient with respect to identification of specific teachings which allegedly disclose the claimed adjusting and combining as positively recited in claim 83. Claim 83 recites limitations which are not shown nor disclosed and claim 83 is allowable over Kenworthy for at least this reason.

The claims which depend from independent claim 83 are in condition for allowance for the reasons discussed above with respect to the independent claim as well as for their own respective features which are neither shown nor suggested by the cited art.

For example, claim 84 recites *communicating the local signal comprising a continuous wave signal and communicating the communication signal comprising a modulated continuous wave signal*. The Office Action states on page 3 that the signals are continuous signals as claimed. Applicants submit herewith a definition of "continuous wave" for the Examiner's convenience. It is clear the mere "continuous signals" of Kenworthy identified in the Office Action fail to disclose or suggest the claimed continuous wave signals as commonly understood in the art. Applicants have electronically searched the Kenworthy patent and have failed to uncover any "continuous wave" or "CW" teachings. Claim 84 recites limitations not shown nor disclosed by Kenworthy and is allowable for at least this additional reason.

With respect to claim 87, Kenworthy fails to disclose adjusting the local signal responsive to the communication signal before receiving the data portion as claimed. Applicants respectfully request clarification of the rejection of claim 87 and the teachings relied upon in support of the rejection if claim 87 is not found to be allowable in the next Action.

With respect to claim 104, Kenworthy fails to disclose or suggest the claimed reducing the amplitude of a frequency component of a modulated continuous wave signal including adjusting a local continuous wave signal providing an adjusted continuous wave signal and summing the adjusted continuous wave signal with the modulated continuous wave signal. Claim 104 is allowable for at least this reason.

On page 4 of the Action, the Examiner states that it is clear that Kenworthy discloses a coherent backscatter system. Applicants have electronically searched



Kenworthy and have failed to uncover any backscatter teachings as defined in claim 104.

Claim 104 is allowable for at least this additional reason.

With respect to claim 107, Kenworthy fails to disclose or suggest the claimed communicating a continuous wave signal, communicating a modulated continuous wave signal, receiving, reducing, or providing the local continuous wave signal. Kenworthy provides absolutely no disclosure or suggestion of continuous wave teachings and the 103 rejection of claim 107 is improper for at least this reason. Kenworthy further fails to disclose or suggest the claimed reducing comprising matching the amplitudes, adjusting and summing. Claim 107 is replete with limitations which are not shown nor suggested by Kenworthy and Applicants request allowance of claim 107 in the next Action.

There is motivation to support the 103 rejection of claim 107 and the rejection is improper for at least this additional reason.

In the event that a rejection of the claims is maintained with respect to the prior art, or a new rejection made, Applicants respectfully request identification *in a non-final action* of elements which allegedly correspond to limitations of the claims in accordance with 37 C.F.R §1.104(c)(2). In particular, 37 C.F.R §1.104(c)(2) provides that *the pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified*. Further, 37 C.F.R. §1.104(c)(2) states that the Examiner must cite the best references at their command. When a reference is complex or shows or describes inventions other than that claimed by Applicants, the particular teachings relied upon must be designated as nearly as practicable. The pertinence of each reference if not apparent must be clearly explained for each rejected claim specified. Applicants respectfully request

clarification of the rejections with respect to specific references and specific references teachings therein pursuant to 37 C.F.R. §1.104(c)(2) in a non-final Action if any claims are not found to be allowable. In particular, Applicants respectfully request clarification of the reference teachings of the prior art relied upon as allegedly disclosing or suggesting limitations of claims 64 and 83 identified herein.

With reference to the statement of reasons for the indication of allowable subject matter and the restatement of the previous statement regarding the reasons for allowable subject matter, Applicants once again object to and disagree with such statements to the extent that the statements include language differing from language of some of Applicant's claims. The patent statutes require claims to be presented and interpreted in accordance with what the Applicants regard as their invention. Accordingly, the claims must be read as Applicants regard them (as they are worded). The statements as currently worded might be interpreted later as reading limitations into Applicants' claims which simply are not there. Applicants regards aspects of his invention as defined by the claims.

**MPEP §1302.14 (8<sup>th</sup> ed.) states, in part, that where specific reasons are recorded by the examiner, *care must be taken to ensure that such reasons are accurate, precise, and do not place unwarranted interpretations, whether broad or narrow, upon the claims.* The examiner should keep in mind the possible misinterpretations of his or her statement that may be made and its possible estoppel effects.**

In accordance with the above, **the Examiner must interpret the claims in accordance with their literal wording, and to the extent the Examiner has not already**

**done so, such is mandated now. If the Examiner relies upon allowance based upon language not appearing in the claims, the Examiner must reject the claims and suggest insertion of such language.** Then, Applicants can respond as they deem appropriate.

Allowance of the claims as literally worded is urged. **If the Examiner's next action is a Notice Of Allowance, this file history is to be interpreted as if the Examiner's statement of reasons for allowance in the last Action never existed or was withdrawn. If the Examiner disagrees with this just stated position, claim rejections are mandated.** If the Examiner once again intends to reaffirm any previous statement in a Notice of Allowance, Applicants respectfully request a telephone call prior to issuance of the Notice of Allowance so Applicants may properly respond during prosecution of the present application.

Applicants respectfully request allowance of all pending claims.

The Examiner is requested to phone the undersigned if the Examiner believes such would facilitate prosecution of the present application. The undersigned is available for telephone consultation at any time during normal business hours (Pacific Time Zone).

Respectfully submitted,

Dated: 2/19/03

By: 

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## continuous-wave radar

**contact-potential barrier** The potential hill at the contact surfaces of two bodies, due to formation of a barrier layer.

**contact-potential difference** The difference between the work functions of two materials in contact, divided by the electronic charge.

**contact pressure** The amount of pressure that holds a set of contacts together.

**contact rectifier** *Metallic rectifier.*

**contact resistance** The resistance in ohms between the contacts of a relay, switch, or other device when the contacts are touching each other. The value is generally a small fraction of an ohm.

**contact wipe** The distance that two mating contact surfaces slide with respect to each other while making or breaking contact.

**contention** A method of operating a multiterminal communication channel such as a local area network (LAN) in which any station can transmit if the channel is free. If the channel is in use, the queue of contention requests are maintained by a computer in chronological or other predetermined sequence.

**continuity** The presence of a complete path for current flow.

**continuity test** An electrical test that determines the presence and location of an open connection.

**continuous carrier** A carrier over which information is transmitted without interrupting the carrier.

**continuous control** Automatic control in which the controlled quantity is measured continuously and corrections are a continuous function of the deviation.

**continuous-duty rating** The rating that defines the load which can be carried for an indefinite time without exceeding a specified temperature rise.

**continuous linear antenna array** An antenna array that consists of an infinite number of infinitesimally spaced sources, as in some dielectric antennas.

**continuous loading** Loading in which the added inductance is distributed uniformly along a line by wrapping magnetic material around each conductor.

**continuously variable slope delta (CVSD) modulation** A technique for converting an analog signal (such as audio or video) into a serial bit stream. Modulator/demodulator circuits that encode and decode functions on the same chip with a digital input for selection.

**continuous power** The power-handling rating of an audio or other amplifier, expressed in watts RMS for a sine wave signal.

**continuous power spectrum** A power spectrum that can be represented by the indefinite integral of a suitable spectral density function. All power spectra of physical systems are continuous.

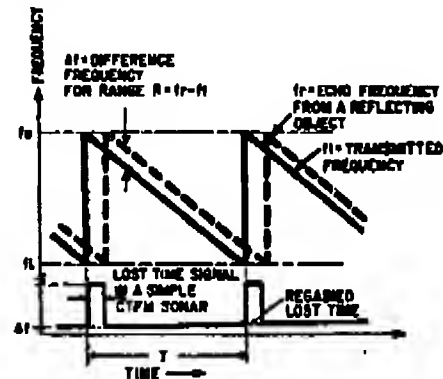
**continuous recorder** A recorder whose record sheet is a continuous strip or web rather than individual sheets.

**continuous spectrum** The spectrum of a wave whose components are continuously distributed over a frequency region without being broken up into lines or bands.

**continuous-tone squelch** Squelch in which a continuous subaudible tone, generally below 200 Hz, is transmitted by FM equipment along with a desired voice signal. The tone activates a frequency-sensitive circuit that unblocks the squelch circuit of the receiver to allow reception of the

desired message. Signals without the correct tone frequency or with no tone are not heard.

**continuous-transmission frequency-modulated sonar (CTFM sonar)** A sonar system whose transmitted frequency is varied continuously in linear sawtooth fashion. The frequency received by reflection from an object is then proportional to the range to that object. The difference between the transmitted and received frequencies is measured with a multichannel frequency analyzer and the results are fed to a PPI cathode-ray display.



Continuous-transmission frequency-modulated sonar principles.

**continuous wave (CW)** A radio or radar wave that maintains a constant amplitude and a constant frequency.

**continuous-wave Doppler radar** *Continuous-wave radar.*

**continuous-wave gas laser** A laser that has a quartz envelope filled with a mixture of helium and neon at a low pressure. Brewster-angle mirrors at opposite ends, and an external optical system. An applied RF field excites the atoms in the tube, causing spontaneous emission of photons. These photons are reflected back into the gas to stimulate neon atoms, with the process repeating and building up to a self-sustained oscillation that becomes the desired coherent laser radiation. The useful portion of this radiation passes through the 1% transmissive mirrors in an extremely narrow beam. See also *gas laser*.

**continuous-wave jamming** The transmission of constant-amplitude, constant-frequency unmodulated jamming signals as a radar countermeasure to change the gain characteristics of enemy radar receivers.

**continuous-wave laser (CW laser)** A laser that generates a beam of coherent light continuously, as required for communication and other applications. The maximum average power is generally less than can be obtained with pulsed operation.

**continuous-wave radar (CW radar)** A radar system whose transmitter sends out a continuous flow of radio energy. The target reradiates a small fraction of this energy to a separate receiving antenna located and oriented to minimize the amount of transmitted power that can enter the receiver. The reflected wave is distinguished from the transmitted signal by a slight change in radio frequency called the *Doppler shift*. Continuous-wave radar can distinguish moving targets against a stationary reflecting